DOCUMENT RESUME

ED 408 098 PS 025 535

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TITLE The Effects of Television Violence and Early Harsh Discipline on Children's Social Cognitions and Peer-Directed Aggression.
PUB DATE Apr 97
NOTE 11p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (62nd, Washington, DC, April 3-6, 1997).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Aggression; *Childrens Television; *Corporal Punishment; Discipline; Information Processing; Longitudinal Studies; Parent Child Relationship; Peer Relationship; Primary Education; *Social Cognition; Television Research; *Television Viewing; *Violence
IDENTIFIERS Social Information Processing

ABSTRACT

This study examined the additive and interactive effects of television viewing and harsh, physical discipline on children's social information processing and subsequent aggression; and the effects of heavy viewing versus permission to view violent content on children's social cognitions and aggression. Participating were 535 children and their families who were part of a 7-year longitudinal, multi-site investigation, recruited in 2 cohorts at the time of kindergarten pre-registration. Information on parental discipline and involvement and television viewing were obtained from mothers through home interviews and questionnaires in year 1. Children responded to questions during the first 4 years about a series of videotaped and cartoon vignettes designed to assess social information processing. Mothers and teachers rated frequency of aggression during years 5 through 7. Findings indicated that permission to view violence and viewing frequency were modestly positively correlated with school aggression. Television violence and harsh discipline increased the proportion of variance in aggression accounted for by harsh discipline alone, and the interaction of harsh discipline with television violence accounted for a greater proportion of the variance in aggression than harsh discipline alone. Heavy viewing did not add to the variance in aggression accounted for by harsh discipline alone. Regression analyses suggested that social information processing mediates the relationship between television viewing and aggression, but that the interaction of harsh discipline and television viewing habits influences aggression directly. Children's social cognitions partly mediated the negative effects of heavy viewing on school aggression only. (Contains seven references.) (KB)

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# THE EFFECTS OF TELEVISION VIOLENCE AND EARLY HARSH DISCIPLINE ON CHILDREN'S SOCIAL COGNITIONS AND PEER-DIRECTED AGGRESSION

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## INTRODUCTION

Children who watch a lot of television are regularly exposed to the casual use of aggression in social problem solving. Continuous exposure to violent content may contribute to the development of negative attitudes, inappropriate norms for behavior, and altered social information processing patterns. Empirical investigations reveal that specific factors mediate the effects of television viewing on behavior, including: (a) how realistic a child believes the performance to be and (b) how much the child identifies with the characters (Eron & Huesmann, 1987). Additionally, research suggests that certain children are more susceptible to the negative consequences of media violence than others. For instance, children who experience a violent home environment may encode violent messages via different cognitive networks from control children (Dohahue, Henke & Morgan, 1988).

Clearly, a majority of resesearchers contend that violent television content contributes to children's aggressive behavior. On the other hand, many hold that frequency of viewing is more important than viewing preferences in evaluating media influences on behavior (Gerbner, 1994). Gerbner argues that with scenes of anger and bloodshed pervading most programs, viewers are inevitably exposed to repetitive violence regardless of their particular preferences. His findings have revealed that frequent viewing independently contributes to individuals' feelings of living in a frightening and dangerous society. The goal of the present study was twofold. First, we investigated the additive and interactive effects of television viewing and harsh, physical discipline on children's social information processing patterns and subsequent aggression. Second, we compared the effects of heavy viewing versus permission to view violent content on children's social cognitions and aggressive behavior.

## METHOD

**Participants:** Participants were 585 children and their families who were part of a longitudinal, multi-site child development project. Families were randomly recruited in two cohorts at the time of their child's kindergarten pre-registration, and they were followed annually for seven years. Details regarding demographic characteristics of the sample can be found in Dodge, Pettit, Bates, and Valente (1995) and Weiss, Dodge, Bates, and Pettit (1992).

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**Measures:** First, early harsh discipline and positive parental involvement were assessed in year one during private home interviews with the mother of each child. Mothers answered questions regarding discipline strategies, their children's misbehavior, and parent-child interactions. Based upon mothers' responses, the interviewer immediately made four ratings: (a) level of restrictive discipline, (b) likelihood that the child had been physically harmed, (c) mother's interest and involvement in the child's social experiences, and (d) proactive teaching of social skills. Second, interviewers assessed children's social information processing patterns during the first four years, using videorecorded and cartoon stimuli depicting negative peer interactions. Children were asked to imagine being the protagonist in each vignette, and they responded to a series of questions intended to tap each individual stage of sequential processing.

Third, mothers and teachers rated the frequency of aggressive behaviors on the Child Behavior Checklist (CBCL) and Teacher Report Form (TRF), respectively, during years five (grade 4) through seven (grade 6). Mean raw scores from aggression subscales across all three years were used as mother- and teacher-reports of child aggression, respectively. Fourth, mothers responded in year one to two questionnaires regarding their children's television viewing habits. On the Culture Questionnaire, mothers indicated how much they agreed with each of two statements: (a) "I allow my child to watch adventure shows that contain killing and violence in them" and (b) "I believe television has a bad effect on children". Responses on the second item were reverse scored, and responses were averaged together to form a single, composite score that represented how much television violence the child's mother permitted him/her to view. On the Television Interest Survey, mothers indicated how frequently their children watch television each week, including time spent viewing alone and time spent viewing with a parent.

## RESULTS

All analyses were conducted with both mother- and teacher-reported aggression scores. Below are the findings from analyses that included teacher-reports. There were some interesting differences between the two sets of results; thus, summary statistics associated with both sets of analyses are presented in Tables 1 and 2.

**Hypothesis 1:** The first hypothesis concerned the relation between television viewing and childhood aggression. Consistent with predictions, permission to view violent content and frequency of viewing were modestly correlated in a positive direction with child aggression at school ($r$=.10, $p$=.009 and $r$=..08, $p$=.03, one-tailed, respectively).

**Hypothesis 2:** The second hypothesis concerned the additive and interactive effects of television viewing and early physical discipline on children's aggression. Consistent with predictions, regression analyses

revealed that television violence and harsh discipline incremented the proportion of variance in aggression accounted for by harsh discipline alone, $\Delta R^2$=.77%, $F_{change}(1,493)=4.10$, $p<.05$. Similarly, the interaction of harsh discipline with television violence accounted for a greater proportion of the variance in aggression than did harsh discipline alone, $\Delta R^2$=.79%, $F_{change}(1,493)=4.21$, $p<.05$. These findings suggest that physically disciplined children who watch violent television may be at greater risk for aggression at school than physically disciplined children who watch less violent programming.

Contrary to predictions, regression analyses revealed that heavy viewing did not add to the variance accounted for in aggression by harsh discipline alone, $\Delta R^2$=.35%, $F_{change}(1,491)=1.85$, n.s.. Furthermore, the interaction of harsh discipline with viewing frequency did not account for more variance than harsh discipline alone, $\Delta R^2$=.04%, $F_{change}(1,491)=.20$, n.s.. These findings suggest that physically disciplined children are at risk for aggression at school regardless of how much television they watch every week.

**Hypothesis 3:** We hypothesized that the relationship between television viewing and childhood aggression would be mediated by children's social information processing (SIP) patterns. Two sets of regression analyses were conducted to examine the mediation model for viewing frequency. First, a simple regression analysis revealed that viewing frequency ($\beta$=.084) accounted for .71% of the variance in aggression. Second, a hierarchical multiple regression analysis was conducted with SIP patterns entered first and television viewing entered next. SIP patterns accounted for 6.9% of the variance and television viewing ($\beta$=.065) accounted for an additional .42% of the variance in aggression, $F_{change}(1,491)=2.25$, n.s.. SIP patterns thus accounted for a substantial 41% of the effect of heavy viewing on childhood aggression at school. Hence, although the decrease in the television viewing beta coefficient was only .02, we conclude that the mediation model fits the data better than the direct effects model.

Similar regression analyses were conducted to examine the mediation model for permission to view violent content. First, a simple regression analysis revealed that television violence ($\beta$=.105) accounted for 1.1% of the variance in aggression. Second, a hierarchical multiple regression analysis revealed that SIP patterns accounted for 6.9% of the variance and television violence ($\beta$=.082) accounted for an additional .67% of the variance in aggression, $F_{change}(1,493)=3.56$, n.s.. SIP patterns thus accounted for a substantial 39% of the effect of television violence on childhood aggression at school. Hence, although the decrease in the television violence beta coefficient was again slight (.02), we conclude that the mediation model fits the data better than the direct effects model. Figure A illustrates the mediation model.

**Hypothesis 4:** We hypothesized that the relationship between the interaction of television viewing and physical discipline with childhood aggression would be mediated by children's social information processing patterns. Two sets of regression analyses were conducted to examine this, more complex

mediation model. First, a simple regression analysis revealed that the interaction of harsh discipline with viewing frequency ($\beta$=.253) accounted for 6.4% of the variance in aggression. Second, a hierarchical multiple regression analysis was conducted with SIP patterns entered first and the interaction term entered next. SIP patterns accounted for 6.9% of the variance and the interaction of harsh discipline with television viewing ($\beta$=.220) accounted for an additional 4.7% of the variance in aggression, $F_{change}(1,489)=25.89$, $p<.01$. SIP patterns accounted for only 26% of the effect of viewing frequency on childhood aggression at school, and there was only a .03 decrease in the interaction term coefficient. Conservatively we conclude that the direct effects model fits the data better than the mediation model.

Two similar sets of regression analyses were conducted to examine this mediation model for permission to view violent content. First, a simple regression analysis revealed that the interaction of harsh discipline with television violence ($\beta$=.272) accounted for 7.4% of the variance in aggression. Second, a hierarchical multiple regression analysis revealed that SIP patterns accounted for 6.9% of the variance and the interaction term ($\beta$=.236) accounted for an additional 5.4% of the variance in aggression, $F_{change}(1,491)=30.36$, $p<.01$. SIP patterns accounted for only 27% of the effect of television violence on childhood aggression at school, and the decrease in the interaction term coefficient was also small enough (.04), that we conclude that the direct effects model fits the data better than the mediation model. Figure B illustrates the direct effects model.

**Teacher- versus Mother-Reports:** We shall now summarize the similarities and differences amongst findings from analyses that included teacher- versus mother-reports of childhood aggression. First, consistent with predictions, in both sets of analyses, permission to view violent content and frequency of viewing were modestly correlated in a positive direction with child aggression. Second, both sets of analyses revealed that television violence and harsh discipline incremented the proportion of variance in aggression accounted for by harsh discipline alone. Heavy viewing also added significantly to the variance accounted for by harsh discipline; however, this was only in predicting aggression at home, not at school. Additionally, both sets of analyses revealed that the interaction of harsh discipline with viewing frequency did not account for more variance than harsh discipline alone. The interaction of harsh discipline with television violence did add significantly to the variance accounted for by harsh discipline, but only in aggression at school and not at home.

Third, consistent with predictions, both sets of analyses revealed that the negative effects of television violence on childhood aggression were, in part, mediated by children's social information processing patterns. Children's social cognitions also partly mediated the negative effects of heavy viewing, but only on child aggression at school, not at home. Finally, according to both sets of analyses, but contrary to predictions, the negative, interactive effects of television viewing habits and early physical discipline did not appear to be mediated by children's SIP patterns.

## DISCUSSION

For many years, parents, educators, and researchers have been concerned with the negative effects media violence may have upon our youngsters. Some believe that violent content desensitizes children and provides them with inappropriate norms for behavior. Others contend that violence saturates so many programs, including children's programs, that heavy viewing is more detrimental than exposure to particular types of shows. Our findings suggest that both frequency of viewing and permission to watch violent programming are associated with peer-directed aggression in childhood. However, television violence appears to put physically disciplined children at even greater risk for aggression at school than does heavy viewing. Hence, our results lend support to the more popular theory that watching violent content in particular has more negative consequences than watching a lot of television overall.

As expected, the negative effects of both television violence and heavy viewing on childhood aggression at school were, in part, mediated by children's social cognitions. In other words, children who watch violent television or a lot of television are at greater risk for aggression if they have deficient SIP patterns than if they have no such deficits. Contrary to predictions, the negative, interactive effects of television viewing habits and early harsh discipline did not appear to be mediated by children's social information processing patterns. These findings disconfirm those of Donahue et al. (1988). They found that physically abused children watched more television and more violent programming than control children; however, they had more difficulty than their peers identifying specific television families and characters, indicating a deficit in their social cognitive development. Various differences in methodology may explain these discrepant findings.

This unique set of findings merits further comment. According to Huesmann, Eron, Lefkowitz, and Walder (1984), children may learn to be aggressive in three primary ways: (a) they repeatedly observe aggression, (b) they get reinforced for their own aggressive behavior, or (c) they are the objects of aggression. Perhaps observing aggression, as on television, will only lead to similar behavior if social cognitions become altered; on the other hand, being the object of aggression may lead to such behavior regardless of any effect on social information processing patterns.

It is interesting to note that analyses conducted with teacher- versus mother-reported aggression scores yielded different results. However, there did not seem to be any clear pattern to these differences; thus it may be too early to speculate about what factors contributed to the unexpected and somewhat confusing set of findings. In future studies the differential effects of television viewing habits on children's aggression across various contexts should be examined more closely.

Findings from the current study should be considered with caution due to several limitations, including construction of the television violence and television viewing variables. Future researchers may want to consider asking children to keep a daily television diary, tracking hours spent viewing each day as well as specific program titles (Sprafkin & Gadow, 1986). Furthermore, more advanced statistical

techniques (e.g., structural equation modeling) may enable us to better investigate the complex interrelationships between discipline practices, viewing habits, social cognitions, and children's aggression. Finally, researchers may want to utilize longitudinal designs to examine the model from a developmental perspective; we must remember that television programs may affect children of different ages and levels of development in very unique ways.

In sum, the current results suggest that children who watch a lot of television and children who are permitted to watch programs that contain violent content are both at some risk for aggression at home as well as school. A variety of factors appear to increase the risk associated with television viewing habits. For example, physically disciplined children who watch violent programming may be at greater risk for aggression than physically disciplined children who watch less violent content. Additionally, children who watch a lot of television are at greater risk for aggression if they have deficient social information processing patterns. In a typical American home, the television set is on nearly seven hours every day. As Gerbner (1994) argues, children are inevitably exposed to repetitive scenes of anger and bloodshed every time they watch. As parents, educators, and researchers, we must continue to examine what factors mediate the negative consequences of television viewing.

We gratefully acknowledge the important contributions of the following to this work: NIMH grants MH28018 and MH42498, and the many individuals in the families and research teams of the Child Development Project. Please address correspondence to Stacy L. Frazier, Psychology Building, Indiana University, Bloomington, IN 47405, (812)855-6961, email: sltaylor@falstaff.indiana.edu.

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Table 1

Summary of Regression Analyses for Relationship between Television Viewing Habits and Childhood Aggression

| | Teacher-Reported Aggression | | Mother-Reported Aggression | |
|---|---|---|---|---|
| Variables | Beta | $\Delta R^2$ | Beta | $\Delta R^2$ |
| Television Violence | .09* | .77* | .10* | .90* |
| TV Violence x Harsh Discipline | .19* | .79* | .00 | .00 |
| Viewing Frequency | .06 | .35 | .12** | 1.3** |
| Viewing Frequency x Harsh Discipline | .07 | .04 | -.11 | .09 |

Note: Standard partial beta coefficients after controlling for level of early harsh discipline. $\Delta R^2$ refers to percent change in $R^2$ after controlling for early harsh discipline.
* $p < .05$ ** $p < .01$

Table 2

Summary of Regression Analyses for Relationship between Television Viewing Habits and Childhood Aggression

| | Teacher-Reported Aggression | | Mother-Reported Aggression | |
|---|---|---|---|---|
| Variables | Beta | $\Delta R^2$ | Beta | $\Delta R^2$ |
| Television Violence | .08 | .67 | .08 | .50 |
| TV Violence x Harsh Discipline | .24** | 5.4** | .18** | 3.3** |
| Viewing Frequency | .06 | .42 | .12** | 1.3** |
| Viewing Frequency x Harsh Discipline | .22** | 4.7** | .20** | 3.8** |

Note: Standard partial beta coefficients after controlling for SIP patterns. $\Delta R^2$ refers to percent change in $R^2$ after controlling for SIP patterns.
* $p < .05$ ** $p < .01$

**Figure A**
**Hypothesis 3: Data Support the Mediation Model**

Note: This diagram is based upon findings with teacher-reported aggression scores.

**Figure B**
**Hypothesis 4: Data Support the Direct Effects Model**

Note: This diagram is based upon findings with teacher-reported aggression scores.